

**Notice of Allowability**

Application No.

09/664,130

Applicant(s)

WILLIAMS ET AL.

Examiner

Art Unit

Katherine W. Mitchell

3677

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 12/12/2005.
2. ☒ The allowed claim(s) is/are 1,3-11 and 16-18.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date 9/24/2003
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),  
Paper No./Mail Date 20060223
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

### **EXAMINER'S AMENDMENT**

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Laurence Begin on Feb 22-23, 2006.

The application has been amended as follows:

**In the Claims:**

Claims 2, 12, 13, 14, and 15 have been cancelled.

The following is an examiner's statement of reasons for allowance:

Independent claims 1 and 11 now require a gas generant "consisting essentially of" silicone as fuel at 10-25%, a perchlorate primary oxidizer at 30-65% or 30-85%, and a coolant at 20-30% or 1-30%, selected from a limited group of coolants (all percents are weight% of the gas generant composition).

Dependent claims 2, 12, and 13 introduce an additional component, a secondary oxidizer, at 30-50% by weight of gas generant, which introduced 112 2<sup>nd</sup> problems due to the "consisting essentially of" wording of the independent and dependent claims. Although applicant did not necessarily agree with the problem of the wording, in order to expedite allowance, claims 2, 12, and 13 were cancelled without prejudice.

The prior art of record fails to teach a gas generant whose components consist essentially of the compounds and percentages recited, without other components.

There is no motivation to choose from a "laundry list" of components and select only those claimed by applicant to the exclusion of other reactants. In particular, the cited reference, Lundstrum and Austrey, teach the silicone as an optional binder or processing aid for the composition, so it is not the exclusive fuel. Grebert et al., applied in **PCT/US00/25584**, which claims priority to a common provisional application and has claims very similar to this application, also teaches that the silicone rubber and oxidizer required a carbon-containing combustion regulator and has multiple interchangeable compounds as fuels, oxidizers, and not motivation to modify per applicant's claimed composition. Hackett, while using silicone as the fuel and perchlorate as the oxidizer, requires a catalyst and does not include a coolant. International Patent Publication No. WO 99/31029 of Fonblanc et al. discloses pyrotechnic gas generating mixtures consisting essentially of an epoxy or silicone resin based cross-linkable reducing binder, an oxidizer of ammonium perchlorate and a sodium nitrate chlorine scavenger, and energetic additives consisting of a cupric compound, i.e., cupric oxide and basic copper nitrate, and a nitrogenated organic compound, i.e., nitroguanidine and guanidine nitrate, thus including components other than those of applicant.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

US patents and patent application publications US 20050223932 A1, US 20040231767 A1, US 6960268 B2, US 20050110253 A1, US 20050082805 A1, US 20050052007 A1, US 20050116454 A1, US 20050104349 A1, US 20040232678 A1, US 20040084885 A1, US 20010045735 A1, US 6979022 B2, US 6805377 B2 were identified during a text search but not considered due to applicant's earlier filing date.

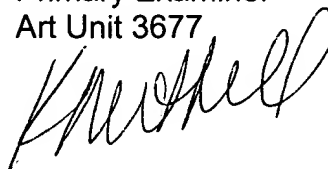
Note that the IDS dated 9/24/2003 is attached and signed, as examiner cannot find a record of the signed form in the IFW file. If this is a duplicate, please disregard.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Katherine W. Mitchell whose telephone number is 571-272-7069. The examiner can normally be reached on Mon - Thurs 10 AM - 8 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, J. J. Swann can be reached on 571-272-7075. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Katherine W Mitchell  
Primary Examiner  
Art Unit 3677



KWM  
2/23/06